

ASCAP NEWSLETTER

Across-Species Comparisons And Psychiatry Newsletter

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"... the difference between a neuroethologist and a neurobiologist is that the methodology and aim of the former is based on a top-down analysis, and that of the latter on a bottom-up analysis."

(c/o Russell Gardner, 1.200 Graves Building (D29), University of Texas Medical Branch, Galveston, TX 77550)

This is the inaugural issue of subscription-based ASCAP Newsletter after two years of being subsidized by The Department of Psychiatry and Behavioral Sciences (DPBS) of UTMB. ASCAP thanks Robert M Rose, former chairman of DPBS, who provided encouragement for the ASCAP venture while at UTMB. He left for the University of Minnesota in late 1989. We miss him. Dr. Rose's intellectual aliveness was a powerful stimulus at UTMB during 12 years of leadership.

For the philosophy guiding this newsletter, predicated upon combinations of top-down and bottom-up analyses, see footnote on p9 .

Newsletter aims: 1. A free exchange of letters, notes, articles, essays or ideas in whatever brief format.

2. Elaboration of others' ideas.

3. Keeping up with productions, events, and other news.

4. Proposals for new initiatives, joint research endeavors, etc.

Comments: 1. How fitting for this inaugural issue that Michael Chance should provide us with his supportive challenging letter and feature essay that relates his personal concerns to those emerging from ASCAP's "thought collective" - to use a concept from Fleck that describes the common information, core concepts and interesting questions that a working group accumulates. Michael Chance is important for many in the ASCAP camp. He directly made across-species com-

parisons whereas many of us are limited to the human species although we try to make such studies relevant for such comparisons. Moreover, a lecture by Michael Chance heard by John Price early in John's career sparked the thinking behind his landmark papers of the mid-1960's. Michael Chance (from Birmingham) originated the Birminghamers whom we read in last year's January issue.

2. How fitting also as we commence some plans for the research aim of ASCAP, that we have heard from John Price, Leon Sloman and Paul Gilbert in warm support of a multinational cross-cultural research project proposed in the November issue of ASCAP! In that issue we noted that a planning group will meet on Sunday morning, March 25, 1990, in Boston, to plan data compilation to compare two dimensions of feeling, ie, when people from various cultural and language groups express feeling 'depressed', will they also register that they feel yielding, submissive and/or defeated?

Now we know that Leon Sloman will be at that meeting along with the Boston group. A second planning meeting will coincide with the annual meeting of the American Psychiatric Association in May in New York City, where Paul Gilbert will be present to give an invited lecture. We will try to assure that Paul can join us.

3. Our psychiatric ethological colleagues from Denmark, Axel Randrup and Grethe Sorensen, have drawn our attention to an important 1978 article by R Morice on the language of

Australian Aborigines. We replicate key parts in this issue to assist our planning. Although fear and depression are clearly referred to by the aborigines, Dr Morice doesn't mention their words for submission or defeat; however, he was aware of Price's work (more of this p5 below).

4. Further, presented for open debate, we provide a measure of anxiety and depression designed originally by Snaith and colleagues for measurement of these states in the medically ill. He restricted his core definition of depression to anhedonia, loss of interest and pleasure, omitting considerations of sleep and appetite. I include the anxiety items because we may want to think about these in an eventual scale: some feel the two dimensions to be very related.

Yesavage⁶ in working out an instrument for the geriatric population started out with 100 items and worked with a number of iterations of test administrations and factor analysis to derive a final 15 items (that also omitted sleep and appetite); in addition he used a yes-no format that makes his scale much easier to administer, without, he feels, loss of information. Perhaps the Yesavage scale should occupy a future issue.

Let me emphasize that I'm soliciting opinions about this core definitional issue of what we mean by 'depression'. Do the seven depression descriptors of Snaith adequately tap and measure whatever depression is? How important is the number of items? Could we simplify the answers to yes or no. How translatable into other languages is this or other scales? How amenable are they to be administered in a comparable fashion to different individuals by many investigators or assistants? Would Beck's Depression Index (BDI) - more inclusive, well accepted but longer and perhaps less precise for translation purposes - perhaps do as well or

better? (Paul Gilbert's research has used the BDI).

Hospital Anxiety and Depression Scale

How have you felt this past week? [Anxiety items are marked A and depression items D. Answers to 1 used for all items].

- 1.A I feel tense or 'wound up':
Most of the time
A lot of the time
From time to time, occasionally
Not at all
- 2.D I still enjoy the things I used to enjoy:
- 3.A I get a sort of frightened feeling as if something awful is going to happen:
- 4.D I can laugh and see the funny side of things:
- 5.A Worrying thoughts go through my mind:
- 6.D I feel cheerful:
- 7.A I can sit at ease and feel relaxed:
- 8.D I feel as if I am slowed down:
- 9.A I get a sort of frightened feeling like 'butterflies' in the stomach:
- 10.D I have lost interest in my appearance:
- 11.A I feel restless as if I have to be on the move:
- 12.D I look forward to things:
- 13.A I get sudden feelings of panic:
- 14.D I can enjoy a good book or radio or TV program:

Language Origins Society

The aim of "The International Society for the Study of the Origins and Evolution of Language" is to promote the case of the study of language origins and evolution dealing with all of language's aspects, including speech. The society was founded (Aug 1983, Vancouver) because a number of scholars - mainly from Western Europe and the US - felt that it might be fruitful to work in closer cooperation and in a more structured way than implemented so far.

The educational background of members presents a compound picture from quite different disciplines: linguistics, anthropology both biological and social, archeology, anatomy, clinical sciences, biology, phonetics, social sciences, psychology, philosophy.

An annual meeting occurs in Western Europe or North America. A newsletter goes to members a few times annually with a bibliography of titles

recently published and book reviews. The society assists members in publishing their works. In general the L.O.S. tries to promote interdisciplinary contacts.

Much of the management is performed voluntarily by board members. Membership fee: D.fl. 40./year.

The society is open to anybody of the scientific community with interest in the above topic. For more information, contact Dr Jan Wind, Institute of Human Genetics, Free University, P.O. Box 7161, 1007 MC Amsterdam, Netherlands.

New Book: Badcock C: Oedipus in Evolution: A New Theory of Sex. Oxford and Cambridge: Basil Blackwell Ltd. 1990. (From the book jacket): In this .. work, .. Badcock puts forward a new theory of evolution based on the primacy of female choice.

[He] clears away myths of what is 'natural' -- monogamy and heterosexuality - and then shows the evolutionary foundations for Oedipal behaviour, homosexuality and penis-envy. By uniting Darwin's insights into the importance of female choice with Freud's into male sexual conflict, the author proposes an original theory of evolution with a new and revealing explanatory power. Common features of human behaviour, such as synchronization of menstrual cycles among cohabiting women, and sibling rivalry, are shown to be normal features of human physiology and psyche. [He] concludes by presenting evidence for the adaptive nature of depression, transference and mourning behaviour.

Letters: 20th Nov. 89

Now that ASCAP can be received through subscription it is presumably open to anyone, and has come of age! So I would like to congratulate you on establishing such a successful open forum for theoretical issues. This presages well for the future in which we may look forward to forming a comprehensive theoretical framework for evolutionary psychology - perhaps we should devote one or more issues a year to sorting out what this should be. First of all we need to state what we can all agree on. May I suggest you, as Editor, may have the best perspective from which to commence the dialogue.

As you will surely agree it is more than a statement of neologisms, helpful though this is.

The Birminghamers will aim to make a statement next year. The purpose of a coherent comprehensive statement is not only to focus research on fundamental issues, but with a more far reaching perspective in view to establish the biological framework for a science of personality, encompassing both evolutionary origins and emergent possibilities.

Congratulations and best wishes.
Michael Chance, Birmingham, Engl

I remain unsure about a single comprehensive statement. In my readings on creativity, many ideas and brainstorming are more likely to produce new productivity than a single flower blooming. A single person working on an article, book or monograph may produce a more systematized result than a committee. But the thought collective of a group of scholars and researchers in the business of idea exchange, different from a journal, may help individuals in their particular works. And, of course, no-one more than you understands the importance of playfulness and an atmosphere of fun. There has to be some coalescence for joint work, as you point out. Are we perhaps seeing some of that with the depression-submission/defeat study that we're beginning to discuss? Then too, I feel that I have made a statement in the three-legged stool metaphor summarized here again: progress in comparing species with reference to psychiatric disorders (in my mind not restricted to, but including, personality issues), is based upon:

1) Molecular biology. This includes examining the phenotypes of genetic molecular accidents, as in the "happy puppet" syndrome of Angelman's mental retardation syn-

drome discussed in November's ASCAP. Zhdanova's efforts to find CSF peptides from manic patients that change rat behavior (p7 this issue) are another example of this.

2) Evolutionary biology. This is the principle topic of Price, Sloman, Glantz, Wilson, Itzkoff (Feb issue), Wenegrat (Mar issue), Badcock (April issue), and many of the others who discuss things here.

3) Reconfiguring the vocabulary and phenomenology of psychiatric and behavioral disorders. Recent disappointments for psychiatry in efforts to discover genes responsible for schizophrenia or bipolar disorder underline that we need "bottom-up" combined with a "top-down" approaches for conceptual frameworks that fruitfully dissect behavior and communications relevant to psychiatry including those important for personality.

Letters (cont.) 11.12.89
Excellent news about your meetings with Dan, Steve and Kalman - I'll be with you in spirit.
John Price, Milton Keynes, Engl

Reference: Price JS: The effect of social stress on the behaviour and physiology of monkeys. In Contemporary Themes in Psychiatry: A Tribute to Martin Roth. Ed K Davison & A Kerr, London: Gaskell, 1989.

I anticipate that the group: 1) will appreciate your involvement in spirit, and 2) would like to have you inspect our plans in detail as these evolve.

Letters (cont.) 11-12-89
. . . I was very happy to hear of the team in Boston. Sounds fun and useful and indeed. We are planning to write up our submission paper soon and will

send over a copy.

I am looking forward to meeting with you in May if funds will stretch. Much to discuss. I have had interesting conversations with Dan Wilson recently who is forging ahead with ideas. ...

My depression chapter had a good review in Oct Amer J Psychiat so am sending over a copy plus one on status.

Paul Gilbert, Derby, England

The references are:

1. Gilbert P: Psychobiological interaction in depression. In Handbook of Life Stress, Cognition and Health Ed S Fisher & J Reason. John Wiley, 1988
2. Gilbert P: Changes: Rank status and mood. To appear in On the Move: The Psychological Effects of Change and Transition. Ed S Fisher & C Cooper. Chichester: J Wiley.

Hopefully, you can participate in the second planning meeting in NYC of the cross-cultural meeting as the "team" considers your role vital.

Letters (cont.) 29/12/89
. . . congrats on quality of type in recent issues.
PJ Tummon, Zumileon, Switzerland

Letters (cont.) 7th December 1989
Thank you for your letter and the November no. of ASCAP. This no. contains much of direct interest for Danish ethological psychiatry (obsession, stereotypy, depression, and their relations to adaptation and to brain dopamine).

We are interested in writing the brief informal essay about our research, which you suggest. It will however, take a little time to prepare it, i.e., we will first procure and study the paper of Pitman

to which you refer in ASCAP.

. .Enclosed an example of a type of depression in a foreign culture [Morice], which appears to us to be related to an adaptive function.

PS: [We] share this subscription with dr. M.Hertz, also from Denmark so we can continue discussing the interesting contents of your newsletter.

Kind regards.

Axel Randrup, Grethe Sorensen

St. Hans Hosp., Roskilde, Denmark

Thank you for your contribution which is highly relevant for the proposed cross-cultural project: Morice R: Psychiatric diagnosis in a transcultural setting: the importance of lexical categories Brit J Psychiat 1978;132:87-95. In Dr Morice's article, he notes that ".. Price (1967) has proposed cogent arguments for [depression].. as an adaptive trait selectively adopted during evolution."

From the summary: "..The language of the Pintupi Aborigines of Central Australia, until recently palaeolithic hunter-gathers, is seen to contain lexical categories for anxiety and depression."

From the introduction: ..In discussing the 'alleged rarity' of depression in African societies, Wittkower and Rin (1965,p 392)⁸ state that 'there are indeed no words for depression in their languages'. Even if this assertion were true, the experiments with colour discrimination by Brown and Lenneberg (1961)⁹ have refuted any notion that perception and cognition are totally dependent on the lexical categories of language. Rather, they claim, 'the more nameable categories are nearer to the top of the cognitive "deck"

Dr Morice, according to the address in the article, is from The Flinders University of South Australia of Adelaide, So Australia. He spent 17 months (commencing Aug 1974) living in the community of Kugkayunti for a full-time equivalent of 4 months. He lived with the Pintupi for varying

periods, as they engaged in their day-to-day activities of hunting and foraging for food, gathering wood, and erecting shelters. He compiled several personal biographies. Also he met with members of the group when they visited Alice Springs.

From a Pintupi-English dictionary, Morice made a list of all words denoting any possible reference to psychological states and related behaviour: "Literal English (Aboriginal English) translations of these words was then obtained, on tape, from the most fluent English-speaking Pitupi in the group, who also happened to be the recognized 'leader'." The glossary was checked with two more informants in order to eliminate idiosyncratic and dialect distortion. Disagreement on a term meant its exclusion. His overall work in an M.D. thesis (unpublished) included words for anger/aggression and psychosis as well as his glossaries for fear/anxiety and grief/depression published in this article.

He found the Pintupi were no strangers to fear, anxiety and depression. The glossaries produced in two of his tables are replicated in full below.

On the basis of his work, Morice concludes: Feelings of persecution, sometimes of a delusional intensity, are frequently experienced by Pintupi Aborigines but are not specific to the depressive, or other, psychoses. As their cognitive set attributes most illness and misfortune to one of three causes--sorcery, spirit loss, or spirit possession--such feelings may occur as a consequence of many physical, as well as psychical complaints.

Of primary importance though is the ability of the Pintupi to express verbally a subjective depressive affect and its behavioural, cognitive, and vegetative sequelae. They possess the communicative resources to do so, and so it is suggested, do other Aboriginal Australians.

TABLE I

The Pintupi glossary of fear and anxiety

kamarrarningu--sudden feeling, premonition that makes person turn around; frightened feeling. May be caused by someone approaching from behind, or by father's spirit warning of the approach of a malevolent spirit.

kanarunytju--insomnia. Person prevented from going to sleep through fear of being harmed or killed by spirits or revenge killers.

kurrun ngulutjarra--sensation of fear, usually at night, but can occur in response to natural phenomena like storms. Conception is that the 'soul' is shaking with fear.

kututu wala--rapid beating of the heart, palpitations. Accompanies fear, and if it occurs at night, will prevent sleep.

nginyiwarrarningu--a sudden feeling of fear causing the person to stand up to see what is causing it.

ngulu--fear, usually due to expectation of harm from another man seeking revenge, distinguishing it from fear of real objects, such as snakes.

ngulunyngulunypa--extreme fear, which implies watchfulness and some degree of immobilization. Fear of being killed.

nyirrkinyirrkimpa--always watchful and alert, for example always looking out for snakes.

patapatanu--shaking of body, often caused by fear.

tiltirpa--shaking from cold or fear.

tjulurrtjingu--sudden fright affecting the spirit or soul, usually during sleep, and causing person to jump up to seek the reason. Also to dream.

tjlurrrwangkangu--as for tjulurrtjingu

tjunianu--as for tjulurrtjingu

tjuni miiltjunu--sensation in stomach caused by fear, or interpreted as warning that something bad will happen to the person, leading to fear.

warmaltjunu--disorder of the spirit or soul caused during sleep by someone shouting. Also fear related to expectation of death (from warmala = revenge killers).

TABLE III

The Pintupi glossary of grief and depression

kanmarraarringu--to refrain from talking, usually through sickness or because something is wrong. Occasionally treated by traditional doctor.

kunta--shame, caused by breach of tribal laws or the confidence of another person.

kurrunpa yulangu--literally 'narrow spirit'. Poor appetite is the result, and can refer to desert

people when food is scarce.

kurrumpa yutye--literally 'narrow spirit'. Poor appetite is the result, and can refer to desert people when food is scarce.

mikiki--a person who cries easily and often.

milyanpungu--to cry tears, especially when thanking about the recently deceased.

minyirra--serious mood with no talking or laughing. Often caused by sadness or loneliness, and accompanied by worry and bad dreams.

mirrpanpa--serious mood with reduced speech, often associated with anger.

mulamula--as for mirrpanpa.

mulyarra--anger, associated with a serious mood.

nantungu--to become stiff or paralyzed from too much worry, from thinking too much about relatives long deceased. Often treated by traditional doctor, who, believing the spirit (kurrunpa) to be absent, finds it and replaces it.

pankipanki--a person who wakes from a deep sleep, who lies awake after having been asleep.

pulyi--disappointment, for example when a promised wife is taken by another man.

raatjunu--as for pulyi

watjilpa--preoccupation with thoughts of country or relatives, to become sick through worrying about them. Other people may try to assuage worry, or traditional doctor may treat.

wurrkulinu--excessive concern for, and worry about, land or relatives, as for watjilpa.

yiluruyiluru--dejection caused by worrying too much for absent relatives, for example if they are in the hospital.

yirraru--as for watjilpa.

yulatjarra--sympathy or sorrow for sick or deceased relatives. If a death has occurred this state is accompanied by the self-infliction of wounds--'sorry cuts'. Not treated by traditional doctor.

yurru kulinu--literally. thinking in the head or hair. Thoughts that people around are angry, producing the desire to leave and find friends or relatives.

wati puli--literally, stone man. A man who sits motionless, cf mulamula nyinanyi = sitting in a serious mood without talking.

Letters (cont.)

December, 1989

I'm grateful to you for the reprints of your works. They are very interesting and useful for me because I deal with the problem of

physiologically interpreting manic-depressive disorder. My way was to test the CSF of patients with this disease on the models of animal behavior, so as to see if this CSF is able to change the recipients' emotional state. Previously, in the 1930's Soviet psychiatrists (Osipov V.P. and his colleagues) made the CSF injections of manic patients to the depressive patients and vice versa. They published that there was a good therapeutic effect of these procedures for a few days.

When I made up my mind to set about this problem, I tried to analyze what symptoms of manic-depressive disorder are most general and if they could be reproduced in animals. I thought that it was hyperextraversion in manic state and hyperintroversion in depressive one. For the experimental models, I've chosen "emotional resonance" (by P.V. Simonov) and "social hierarchy". In addition I've used self-stimulation.

The main idea was to observe the changes of the intensity and the character of animals' communications after the injection of a patient's CSF to one of the animals.

I send you the results of this work. I'm sorry that they are mostly in Russian, so I send you also the reprint of my abstract at the 2nd Congress of IBRD in Budapest.

Now I'm going to work at the Institute of Physiology with monkeys and the problem will be mostly the same to model the psychiatric symptoms of the changed social interactions.

If these experiments are of interest for you, let me know.

With kind regards.

Irene V Zhdanova, Leningrad, USSR

I think your work is highly interesting and replicate your abstract below. Translation is not readily available for your complete article,

so we remain uncertain about details not in the short versions. For example, I am unclear about the meaning of Simonov's "emotional resonance" although the concept sounds intriguing. With "self-stimulation" (referring here to the abstract below), I wonder if this refers to electrical self-stimulation methods of Olds. Or does this refer to the behavior of the animals as directly observed, ie, licking, pacing, etc? Finally, how do you measure the animals' status in the social rank hierarchy?

How would you feel about writing a summary essay in English for a future issue of ASCAP that would provide your data in more complete form?

Quoted Abstract: Zhdanova IV, Tokarev AV: MODULATION OF THE EMOTIONAL REACTIVITY OF ANIMALS BY CSF PEPTIDE FRACTIONS OF THE PATIENTS WITH MANIC-DEPRESSIVE DISORDER. The investigations of the biological activity of CSF of non-drug manic-depressive patients showed that being injected intraventricularly it modulated the emotional state of rat-recipients, evaluated by methods of "emotional resonance" (type of reaction to the cry of the rat-partner), self-stimulation and changes of socio-hierarchical position of recipients. The modulated emotional state, according to behavioral changes, in rat-recipients remained during 2-8 days after injection of CSF of donor-patients. The changes of the emotional state of animals induced by CSF of manic and depressive patients were of the opposite direction, that is CSF of manic patients induced "positive" emotional effect, while depressive CSF led to depressive state of the animals. Some of the experimental animals (7,3%) demonstrated neurosis-like behavior during more than 60 days after injection of donor CSF. Administration of CSF of healthy people and intact rats had no obvious effects. Biochemical analysis (gell-filtration and ensimatic treatment of CSF) has shown that emotional effects were connected with the peptide fractions with M.M. less than 2 kDa. Thus, endogeneous peptides of donor-patients modulate the affective state of animals. This allows us to believe that further investigations can bring new methods of therapy of affective disorders by endogeneous substances.

* Featured Essay *

Systems Forming: THE DEFINITIVE ADAPTIVE STRATEGY by Michael R A Chance

Kalman Glantz¹⁰ has eloquently defined the differences between the methods of enquiry which distinguishes the Behavioural Ecologists (BE) from the Evolutionary Psychologists (EP). I am not here going to argue the toss between them but, from a wider perspective, to introduce the contestants to an alternative approach which takes into account recent discoveries of the way, the brain and hence how our minds actually operate. In all debates we can hope that resolution comes at a higher level from new observations as well as discoveries if the possibility of a synthesis between both sides of an argument is ruled out. I think both approaches (BE and EP) are valid, but of very limited scope in present circumstances, as I hope to show.

There can be little doubt, if we look around us, that human beings invent, create and indeed generate many social as well as physical structures. Thus "generativity" has recently been identified as a previously unnoticed development in recent human evolution. So it is worth now bringing into the argument because it has direct bearing not only on the scope of a civilisation, but on its eventual survival. Take for example the differences between the architecture of Greek Civilisation and the Roman Empire. There is a major and very significant difference between the architrave supported on columns of classical architecture and the Roman Arch because of their discovery that much of the weight on top of an arch is converted into lateral thrust, thus enabling a structure to be generated which poses more use; eg, for spanning greater distances between the supports built of smaller building blocks. Generativity is as

much an emittance¹² as a feature of responsiveness to an environment and both contribute to the scope of, in this instance, building activity. One cannot say that one architectural system is more adaptive than another except that it is clear that the Arch enabled the Romans to build aqueducts spanning long distances and so enabled them to extend their ability to locate cities away from the immediate vicinity of water sources. This extended the range of their empire - but is it more adaptive? I think it is more realistic to say it is more competent - but yet again only in one respect, because in the end they washed away the soil from North Africa into the Mediterranean and this meant that the way the civilisation organised their behaviour had a self-terminating element built in. In fact we see from the ecological concerns of today that an ecological system based on an awareness of all the relevant recycling processes is the only way that the generativity of humanity can be accommodated in such a way as to last into the future. So I argue as I postulated in Social Fabrics of the Mind that our systems-forming activity is now the only universal mechanism left to us. In fact as I stated there and as is now more and more recognised, the survival of our species is synonymous with the survival of the world eco-system. Is that not how we should reformulate evolutionary adaptiveness? only when the individual is free to explore ie., when in the hedonic social mode (though not necessarily in the absence of danger) (Cosmides L - quoted in 10) is the Systems Forming Faculty able to operate. So it is important for individuals whose mental state tends to generate agonistic social relations to follow up EP concerns.

1. Ploog DW: Neuroethology. In Encyclopedia of Neuroscience Vol 2 (Ed) G Adelman, Boston: Birkhauser, p780
2. For ASCAP Vol 3 (Jan through Dec, 1990) please send \$18 (US dollars) for the 12 issues.
3. ASCAP philosophy and goal. High scientific importance rests on comparing animal behaviors across-species to understand better human behavior, knowing as we do so that evolutionary factors must be considered for understanding properly such behaviors. To accomplish these comparisons, very different new ways of viewing psychological and behavioral phenomena are required. This in turn explains why we need new words to define and illustrate new dimensions of comparisons across species. We expect that work in natural history biology combined with cellular-molecular biologic research will emerge as a comprehensive biologic basic science of psychiatry. Both top-down and bottom-up analyses are needed. Indeed, this must happen if we are to explain psychiatric illnesses as deviations from normal processes, something not possible now. Compare to pathogenesis in diseases of internal medicine.

Some neologisms that hopefully will help implement these goals are those of:

 - a. Michael R. A. Chance: "hedonic" and "agonic" refer to the tone of groupings of conspecifics (members of a same species) i.e., relaxed and fun-loving versus tense and competitive.
 - b. J.S.Price: "anathetic" and "catathetic" describe conspecific messages. Catathetic messages "put-down" and anathetic "build-up" the resource holding potential (R) of target individuals.
 - c. Russell Gardner, Jr.: "psalic" is a 2 way acronym: Propensity States Antedating Language in Communication and Programmed Spacings And Linkages In Conspecifics. This describes communicational states conjecturely seen with psychiatric disorder and normality (human and non-human), ie, alpha psalic seen in manics, high profile leaders and dominant non-human animals. Eight psalics are named alpha (A), alpha-reciprocal (AR), in-group omega (IGO), out-group omega (OGO), spacing (Sp), sexual (S), nurturant (N), and nurturant-recipient (NR).

These new or renewed terms are initiated or elaborated in Chance, MRA (Ed) Social Fabrics of the Mind. Hove and NJ: Lawrence Erlbaum Associates, 1988.

 - d. Paul Gilbert: Social Attention Holding Power/Potential (SAHP) focuses upon the non-aggressive facets of leadership when this is deployed in the hedonic mode. See ASCAP v.2, #1 and his new book: Human Nature and Suffering. Hove and NJ: Lawrence Erlbaum, 1989.
4. Fleck S: Genesis and development of a scientific fact. (Ed) TJ Trenn, RK Merton. Chi, U Chi Press, 1979
5. Snaith RP, Taylor CM: Rating scales for depression and anxiety: a current perspective. Br J clin Pharmac 1985;19:17S-20S.
6. Yesavage JA: Geriatric depression scale. Psychopharm Bull 1988;24:709-711
7. Price JS: The dominance hierarchy and the evolution of mental illness. Lancet 1967;iii(29 July):243-6.
8. Wittkower ED, Rin H: Transcultural psychiatry. Arch Gen Psychiat 1965;13:387-394
9. Brown RW, Lenneberg EG: A study in language and cognition. In Psycholinguistics (ed. S Saporta). NY: Holt, Rinehart S Winston, 1961.
10. Glantz K: Conference report ASCAP Newsletter 1990;2(#10, 15 Oct)
11. Corballis MC: Laterality and human evolution. Psychol. Rev. 1989;96(#3):492-505.
12. Chance MRA: Kohler's chimpanzees - how did they perform? and Schiller PH: Inmate constituents of complex responses in primates, both in Animal Problem Solving. (Ed) AJ Riopelle Penguin Modern Psychology. Harmondsworth, Middlesex, England, 1967.